Work Orde November-30-12				*940	)56*		·					Page	1
Item ID: Revision ID:	D3199-1			Accept	*N900	<b>040</b>	100	)*	Setup	Start	. 14	S1*	
Item Name:	Bracket			.•						Stop	*N:	S2*	
Start Date: Required Date: Reference:	12/13/12 12/13/12	Start Qty: 50.00 Req'd Qty: 50.00	*50 *50		Cust Item I Customer:	D:							
Approvals:	Process Pla	in: MLJ	Date: \2-\2-	03 Tooling:	D:	ate:			Run	Start	17	R1*	
	QC:		Date:	SPC (Y/N):	D:	ate:				Stop	*N	R2*	
Sequence ID/ Work Center II	<b>D</b>	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	
Draw Nbr	Rev	ision Nbr											
D3199	E											مندر	
*100*		FLOW WATER JET		0.00				54					
Waterjet FLOW CNC Waterj		Memo Cut as per D Dwg Rev:_ Prog Rev:_ Deburr if re	12	0.00				<del></del> .	444			- DM 15-	<u>i</u> (~)
110	•	QC2- Inspect parts off m	achine FAI/FAIB	0.00									
*11 <b>0</b> *		Memo		0.00				54		٥		Ju 12-1	2-13

Memo

Quality Control

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFORM	ANCE / UPDATE	<u>:</u>	•		
											QA Closed:	Date:	
Work Orde	or:					DISPOSITION			AC	GAINST DEI	PARTMENT	PROCESS	
VVOIK OTU	ei. -	<u>_</u>			<del></del>	Rework	1		Skid-tube Cro	sstube		Water Jet	Engineering
Part I	No.					Scrap	1		<b>├</b>	nall Fab	Pro	d. Eng. Coor.	Quality
	•	•				Use-as-is	1	Therm	oforming Fi	nishing	Rec/Stor	e/Packaging	Other
NCR I	No.					Work Order Update	]		Large Fab Con	nposite		Supplier	
Root			<u> </u>		Descri	ption of work order update		nitial	Action		Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Description	1	Date	Verification	QC Inspector
Doc/Data		,											
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Operator													
Material													
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Unapproved			<u> </u>				<u> </u>	- !		T	L		
							AUL	T CATE	GORY				
Landi	_	1			_	General	_	1			1	Γ	٦ .
	$\vdash$	Bending				Bend		Grain		<u> </u>	Ovalized	L	Pressure/Forced
	-	Centre N	ot Concei	ntric to (	o/s	BOM/Route	<u> </u>	Hardwa			Over/Under	<del> </del>	Temperature/Cure
	-	Cracks			- , ·  _	Broken/Damaged	ļ	<b>⊣</b> '	on Incomplete		Part Incorre	<del>-</del>	Weld
	_	Crushed/	Crimped.			Burrs		-	ions Incomplete/Unclea	ır	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination	_	Mainte			Part Moved		
	_	Heat Trea				Countersink		Mislabe			Positioned \	_	7
		Inspectio	n Strip in	Tube		Cut Too Short	L	Misread	1	L	Power Loss,	'Surge	Other
		Ripples in	Bend			Drill Holes		Offset					

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drawing

Finish

QC

Quality Control

Memo

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-	100	NFORN	AANCE / UPDA				
											QA Closed:	Date:	
Mark Ord	or:					DISPOSITION				AGAINST DE	PARTMENT,	PROCESS	
Work Ord	er.					Rework	7		Skid-tube	Crosstube		Water Jet	Engineering
Part	Nο					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
		<del> </del>				Use-as-is	1 1		noforming	Finishing		re/Packaging	Other
NCR	No.					Work Order Update	1		~ <u> </u>	Composite	·	Supplier	
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Cause		Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Descrip	tion	Date	Verification	QC Inspector
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	<u> </u>	Centre N	ot Concer	ntric to	O/S	BOM/Route	-	Hardwa		<u> </u>	Over/Under		Temperature/Cure
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	_	Heat Trea				Countersink		Mislabe			Positioned \		٦.
1		Inspectio	n Strip in	Tube	1	Cut Too Short	1	Misread	d .		Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

\*160\* QC

Quality Control

Memo

131.11

170

Identify as per dwg & Stock Location: 336

\*170\*

Packaging

Packaging

Memo

0.00

54x 30-11

Page 3

Insp.

												DQA:	Da	te:	
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORM	/IANCE / UP	DATE					
_												QA Closed:	Da	te:	
NA/ and Cond						DISPOSITION				AGAINST D	E	PARTMENT	PROCESS		
Work Ord	er:		- · · -···			Rework	1		Skid-tube	Crosstube	$\neg$		Water Jet		Engineering
Part I	Nο					Scrap			Machining	Small Fab	٦	Pro	d. Eng. Coor.		Quality
, aiti	10.				···	Use-as-is			noforming	Finishing	7		e/Packaging	$\Box$	Other
NCR	No.					Work Order Update			Large Fab	Composite		,	Supplier	-	
						'	,		٠ ــــا	· L.					
Root					Descri	ption of work order update	ı	nitial	Ac	tion		Sign &			
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Desc	ription		Date	Verificatio	n	QC Inspector
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Landi	ine (	iear	· · · · · · · · · · · · · · · · · · ·			General		. CATE	<u> </u>						
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	$\vdash$	Centre N	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re	<u> </u>		Over/Under	tolerance		Temperature/Cure
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		Cuffs				Contamination		Mainte	enance			Part Moved			_
		Heat Trea	at			Countersink		Mislabe	eled	Ī		Positioned \	<b>V</b> rong		_
1		Inspectio	n Strip in	Tube		Cut Too Short	Г	Misread	1	1		Power Loss/	'Surge		Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

0.00

0.00

OC21- Final Inspection - Work Order Release

Memo

180

OC.

\*180\*

**Quality Control** 

MI 13-1-11

											DQA:	Date	
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFOR!	/IANCE / UPDA	TE		· · · · · · · · · · · · · · · · · · ·	
											QA Closed:	Date	
Work Ord	er.					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part NCR	No.					Rework Scrap Use-as-is Work Order Update		Therm	Machining noforming	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
NCK	NO.				<del></del>	Work Order Opdate	J		carge rab	.omposite		Supplie: [	ا ا
Root					Descri	ption of work order update	Τ	nitial	Action	1	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Descript	ion	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling									I	•			
Operator													
Material									İ				
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		Bending				Bend		Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	ion Incomplete		Part Incorre	ct	Weld
	Γ	Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/Unc	lear	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved		
		Heat Trea	at ·			Countersink		Mislabe	·led		Positioned \	<b>V</b> rong	
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	t		Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

**Picklist Print** 

November-30-12 8:29:20 AM

Work Order ID:

94056

Parent Item:

Comments:

Parent Item Name:

Bracket

D3199-1

IPP Rev:C

IPP Rev:D

Removed Scribing

As per Rev B

05-11-05 JLM 06-11-24

IPP Rev:E 11.03.31 as per ecn 11-

JLM

	531 DD verf:EC	, per 10 / B	001.2										
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S20GA 304/316 .040 Sheet		Purchased	No			100	sf	85.2500	0.099	<b>5.210525</b> 5.3			Jm7-12-1
				Location		Loc Qty	<u>Lo</u>	c Code					

MAT020 85.2500325 121380 0.0000325 122732 16.5 122753 122753 68.75

Page 1

Required Date: 12/13/12

Required Qty: 50.00

**Start Date: 12/13/12** 

Start Qty: 50.00

										DQA:	Date	:
NCR: Y	es / No				WORK ORDER NON-C	ON	NFORM	MANCE / UPDATE		QA Closed:	Date	:
Marile Onda					DISPOSITION			AGAIN	NST DE	PARTMENT	/PROCESS	
Work Orde	er:				Rework	1		Skid-tube Crosstu	ıbe		Water Jet	Engineering
Part N	No.				Scrap			Machining Small	_	Pro	d. Eng. Coor.	Quality
	<del></del>				Use-as-is	]	Therm	noforming Finish	ing	Rec/Sto	re/Packaging	Other
NCR N	No			· · · · · · · · · · · · · · · · · · ·	Work Order Update	]		Large Fab Compos	site		Supplier	
Root				Descri	ption of work order update		nitial	Action		Sign &		
Cause	Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator						1						
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Other												
Process										<u> </u>		
Supplier					•							
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	Bending	S		<u> </u>	Bend		Grain		<u> </u>	Ovalized	<u> </u>	Pressure/Forced
	Centre I	Not Conce	ntric to	O/S	BOM/Route		Hardwa	re		Over/Under		Temperature/Cure
	Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorre	<b>├</b> ~	Weld
	Crushed	d/Crimped			Burrs		4	ions Incomplete/Unclear		Part Lost/M		Wrong Stock Pulled
	Cuffs				Contamination	$\perp$	Mainte	enance		Part Moved		
1	Heat Tr	eat			Countersink	1	Mislahe	eled		Positioned \	Nrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

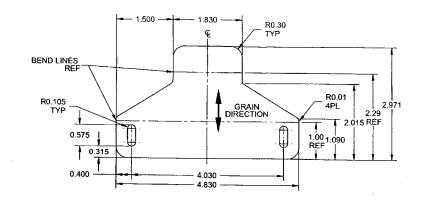
DART AEROSPACE LTD	Work Order:	94056
Description: Bracket	Part Number:	D3199-1
Inspection Dwg: D3199 Rev: E		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

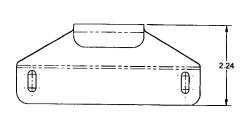
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.210	+0.005/-0.001	0.213"	_		√	Jhnoi
0.575	+/-0.010	0.578"	_		<b>√</b>	
1.090	+/-0.010	1.09000	_		V	
2.015	+/-0.010	2.015	_		V	
2.971	+/-0.010	2.975"	_		V	
1.830	+/-0.010	1.628"	_		V	
4.830	+/-0.010	4,827"	-		V	
4.030	+/-0.010	4.027"	_		V	
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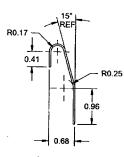
Measured by:	J~	Audited by:	15°	Preliminary Approval:	
Date:	12-12-13	Date:	12 12 14	Date:	

Rev	Date	Change	Revised by	Approved
Α	06.10.20	New Issue	KJ/JLM	
В	06.11.24	Dwg Revision revised	KJ/JLM	11/
С	11.03.08	Dwg Rev updated	KJ , A	
D	12.02.06	Dwg Rev updated	KJ de	
			771	<u></u>



## **D3199-1F FLAT PATTERN**





D

С

В

Α

SHOP CLUY KI TRUITO ENGLYTERIOR TINCONT ACCULATION SUBMITTION SECONDAL ... WATER SOUTH 94056 MLJ

DESIG	• + 7	DART AEROSPA	CEL	TD .
REV.		DESCRIPTION	BY	DATE
Α	NEW ISSUE		CP	03.08.05
В	2.24 WAS 2.142; ADD F	INISH; UPDATE DWG	СВ	06.11.01
С	ADD -3/-4 PART (SHEET	T 2-4)	HS	09.11.19
D	RE-DESIGNED D3199-3 TO ELIMINATE BINDING INSTALLED. REF.: PAR	N-41-3F PER CUSTOMER FEEDBACK S OF DOOR ONCE BRACKETS ARE R11-79	мв	11.03.21
E	TO OPTIMIZE FIT.	W-4/-SF PER CUSTOMER FEEDBACK	мв	11.07.11

DRAWN HAWKESBURY, ONTARIO, CANADA CHECKED DRAWING NO. REV. E D3199 MFG. APPR. SHEET 1 OF 4 APPROVED TITLE SCALE DE APPR. **BRACKET** NTS DATE 11.07.11

NOTES:
1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S20GA
2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNILESS OTHERWISE NOTED
4) UNITS: INCHES UNILESS OTHERWISE NOTED
5) RBFAK SHAPP FORES: 0.05 TO 0.010 MAY

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-X" AND B/N "BXXXXX" PER QSI 044 6.1
7) WEIGHT: D3199-1 = 0.11 lbs, D3199-3/-4 = 0.26 lbs EACH

